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The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JIE NI and RICHARD S. JENSEN

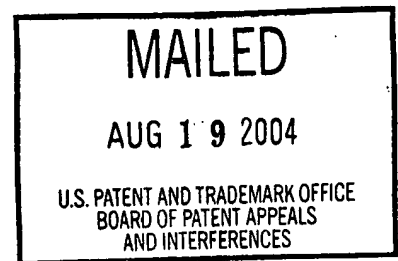
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Appeal No. 2004-0180  
Application No. 09/124,642

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ON BRIEF

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Before KRASS, GROSS and BLANKENSHIP, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-19.

The invention is directed to a system for synchronizing a network link, best illustrated by reference to representative independent claim 1, reproduced as follows:

1. A method of synchronizing two ends of a bi-directional network communication path comprising:

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repeatedly transmitting from an end of the bi-directional communication path a sequence of predetermined characters if reception is lost at that end; and

resynchronizing the link from both ends if the sequence of predetermined characters is received at the other end.

The examiner relies on the following references:

Nakayama	5,259,004	Nov. 2, 1993
Sauer et al. (Sauer)	6,011,821	Jan. 4, 2000
		(filed Jun. 5, 1997)
Olafsson	6,081,567	Jun. 27, 2000
		(filed Jun. 7, 1999)

Jordan et al. "Synchronous Transmitter-Receiver Clocking Method", IBM Technical Disclosure Bulletin, Vol. 7, No. 12, May 1965, pp. 1189-1191.

Claims 1-19 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner offers Sauer and Olafsson with regard to claims 1, 7-10 and 16-19, adding Jordan to this combination with regard to claims 2, 3, 5, 6 and 11-15. With regard to claim 4, the examiner offers Sauer and Olafsson with the addition of Nakayama.

Reference is made to the brief and answer for the respective positions of appellants and the examiner.

#### OPINION

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071,

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1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teachings, suggestions or implications in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the

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arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR 1.192 (a)].

With regard to the independent claims, e.g., claim 1, the examiner asserts that Sauer teaches, at column 3, lines 12-13, the conditions under which synchronization or resynchronization is required in a communication system; that Olafsson discloses, in the same field of endeavor, at column 11, lines 8-50, that upon a loss of synchronization between two ends (modems), a repetition of a known set of symbols (predetermined characters) is transmitted from one end to the other end until synchronization is regained; and that it would have been obvious, upon loss of reception, to repeatedly transmit a sequence of known characters from one end of the communication network to the other end, in order to receive the known characters and, based on the recognition of the known characters, synchronize its reception to the transmission of the first end, and vice-versa.

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The teachings of the applied references, along with the examiner's rationale, in our view, establishes a prima facie case of obviousness, shifting the burden to appellants to provide evidence, in the form of persuasive argument, or objective evidence, to overcome such prima facie case.

Appellants argue that while both references may discuss resynchronization when synchronization is lost, unlike the instant invention, neither reference discusses resynchronization when "reception" is lost; and neither reference distinguishes between loss of reception and loss of synchronization.

We disagree. Sauer explicitly teaches a synchronization or resynchronization being required after certain conditions, one of those conditions being "an interruption and reconnection to the transmission path" (column 3, lines 12-13). An "interruption...to the transmission path" clearly indicates a "loss of reception." Contrary to appellants' assertion, manifestly, Sauer does discuss resynchronization when reception is lost. Olafsson teaches a specific measure to be taken when resynchronization is to be performed, i.e., the transmission of a repetition of a known set of symbols until synchronization is regained. Thus, the combination of Sauer and Olafsson would have suggested to the artisan a specific resynchronization technique

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to be used in order to recover synchronization after a loss of reception in Sauer.

Accordingly, we find that the examiner has established a prima facie case of obviousness which has not been successfully rebutted by appellants since appellants have not convinced us of any error in the examiner's rationale.

The rejection of claims 1, 7-10 and 16-19 (Group I) under 35 U.S.C. § 103 is sustained.

We will also sustain the rejection of claims 5, 9, 12 and 14 (Group II) under 35 U.S.C. § 103.

These claims provide for detection and transmission of "three successive idle 1 characters." The examiner turns to Jordan, at page 1191, for a teaching of a "string of idle characters...sufficient to permit complete resynchronization" in a method for synchronizing transmitters and receivers. The examiner concluded, quite reasonably in our view, that, in view of such a teaching, it would have been obvious to use any character set, including idle 1 characters, as synchronization characters "because synchronization characters are simply a combination set of non-data characters which are designed to be conventionally recognized by transmitter and receiver as

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synchronizing characters to synchronize the transmitter with the receiver" (answer-page 6).

Appellants argue that the "mere fact that Jordan may teach Idle 1 characters in general, does not make obvious the use of three successive idle 1 characters as claimed" (brief-page 11). We disagree. Appellants have not shown any criticality to the use of "three," as opposed to any other number of, idle 1 characters. Moreover, Sauer indicates, at column 3, lines 56-59, that when "three successive pulses...are absent, a synchronization loss is established..." This, taken together with Jordan's teaching of using idle 1 characters for resynchronization purposes, would have suggested to the artisan to use three successive idle 1 characters to determine synchronization loss and/or resynchronization. In any event, the specific number of successive idle 1 characters used would appear to be a "design choice," as asserted by the examiner. This is especially so since no criticality has been ascribed by appellants to the use of this specific number of idle 1 characters and appellants, themselves, indicate, at page 4 of the instant specification, that while an idle 1 character is employed by the instant invention, "any character may be employed." Thus, since Sauer teaches another "character" (i.e., a pulse), wherein

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three such characters in succession may indicate a loss of synchronization, the artisan would have found it obvious that three characters (e.g., idle 1 characters as taught by Jordan) in succession would also be applicable to "resynchronization."

We will also sustain the rejection of claims 3 and 15 (Group III) under 35 U.S.C. § 103.

These claims add the limitation that the sequence of predetermined characters comprises "seven successive idle 1 characters."

While appellants argue that the applied references do not make this limitation obvious, we disagree for reasons supra. Whether the number of characters is three or seven, it would appear to be a "design choice," as indicated by the examiner at page 9 of the answer, since the artisan would recognize that "as the number of repetitions increases so does the reliability of synchronization but at the expense of transmission time and bandwidth."

Moreover, we note, again, that appellants have ascribed no particular criticality to the use of "seven" successive idle 1 characters. At page 11 of the brief, appellants appear to argue criticality of using seven such characters, in referring to "page 6, lines 10-15 of the application." However, our review of this



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cited portion of the instant specification indicates merely that "if the synchronization process receives seven consecutive idle 1 characters, it will enter the loss of sync state." This is no indication of any particular criticality in the use of seven, as opposed to any other number of, successive idle 1 characters to achieve resynchronization.

We will not sustain the rejection of claims 6, 7 and 13 (Group IV) under 35 U.S.C. § 103 because these claims recite that resynchronization "further includes detecting and transmitting an idle 2 character" (claim 6) or that there is a detection and transmission of "another set of predetermined characters after detecting said set of predetermined characters" (claim 13).

While we agree with the examiner that the specific characters employed in the method of resynchronization are of no moment, so long as the function is the same, these claims require two different types of characters. The examiner has pointed to nothing within the references suggesting the use of two different characters in a resynchronizing method. Thus, the claims require three successive idle 1 characters and then an idle 2 character in order to achieve resynchronization, and the examiner has not identified what is being relied on in the references to suggest the use of two *different* characters in this manner. The examiner

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attempts to rely on "time windows" in Sauer (see page 5 of the answer) as a suggestion of the limitation recited in claim 6 but we do not find these "time windows" to be suggestive, in any manner, of the two different types of characters claimed. Accordingly, no prima facie case of obviousness has been shown regarding claims 6, 7 and 13.

We also will not sustain the rejection of claim 8 (Group V) under 35 U.S.C. § 103. Not only does claim 8 depend from claim 6 the rejection of which we have reversed, but claim 8 specifically refers to "applying a hysteresis sub-process..." and the examiner has not identified any such sub-process in the applied references. While the examiner refers to column 3, lines 24-30, of Sauer as teaching this limitation (see page 5 of the answer), reference to this portion of Sauer finds no such teaching.

#### CONCLUSION

We have sustained the rejection of claims 1-5, 9-12 and 14-19 under 35 U.S.C. § 103 but we have not sustained the rejection of claims 6-8 and 13 under 35 U.S.C. § 103.

Accordingly, the examiner's decision is affirmed-in-part.

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No time period for taking any subsequent action in  
connection with this appeal may be extended under 37 CFR  
§ 1.136(a).

AFFIRMED-IN-PART



ERROL A. KRASS )  
Administrative Patent Judge )



ANITA PELLMAN GROSS )  
Administrative Patent Judge )

BOARD OF PATENT  
APPEALS AND  
INTERFERENCES



HOWARD B. BLANKENSHIP )  
Administrative Patent Judge )

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